

Amendments to the Claims:

Claims 1-27 were pending in this application. Please cancel claims 1-27 and add the following new claims 28-40:

1.-27. (canceled).

1 28. (new) A method of monitoring data stored on a primary storage
2 system comprising:
3 creating a sequence of mirrors-in-the-middle, each mirror-in-the-
4 middle including a copy of data stored on the primary storage system at a fixed point
5 in time;
6 checking a first mirror-in-the-middle of the sequence of mirrors-in-the-
7 middle to see if a copy of data stored on the first mirror-in-the-middle satisfies at
8 least one constraint; and
9 if not, repeating checking previous mirrors-in-the-middle in the
10 sequence of mirrors-in-the-middle until one of the checked previous mirrors-in-the-
11 middle includes an uncorrupted copy of data satisfying the at least one constraint.

1 29. (new) The method of claim 28 further comprising restoring the
2 uncorrupted copy of data to the primary storage system.

1 30. (new) The method of claim 28 wherein checking comprises
2 scanning for viruses.

1 31. (new) The method of claim 28 wherein checking comprises
2 monitoring a database for consistency of constraints.

1 32. (new) The method of claim 28 further comprising storing the
2 sequence of mirrors-in-the-middle using a data management appliance.

1 33. (new) The method of claim 28 further comprising restoring the
2 copy of data stored on the first mirror-in-the-middle to the primary storage system
3 if the copy of data stored on the first mirror-in-the-middle satisfies the at least one
4 constraint.

1 34. (new) The method of claim 28 further comprising:
2 if the copy of data stored on the first mirror-in-the-middle satisfies the
3 at least one constraint, checking a copy of data stored on at least one additional
4 mirror-in-the-middle later in the sequence of mirrors-in-the-middle than the first
5 mirror-in-the-middle to see if the copy of data stored on the at least one additional
6 mirror-in-the-middle satisfies the at least one constraint.

1 35. (new) A data management appliance comprising:
2 a random-access storage unit storing a sequence of mirrors-in-the-
3 middle, each mirror-in-the-middle including a copy of data stored on a primary
4 storage system at a fixed point in time; and
5 control logic in communication with the random-access storage unit,
6 the control logic operative to checking a first mirror-in-the-middle of the sequence
7 of mirrors-in-the-middle to see if a copy of data stored on the first mirror-in-the-
8 middle satisfies at least one constraint and, if not, repeating checking previous
9 mirrors-in-the-middle in the sequence of mirrors-in-the-middle until one of the
10 checked previous mirrors-in-the-middle includes an uncorrupted copy of data
11 satisfying the at least one constraint.

1 36. (new) The data management appliance of claim 35 wherein the
2 control logic is further operative to restore the uncorrupted copy of data to the
3 primary storage system.

1 37. (new) The data management appliance of claim 35 wherein
2 checking comprises scanning for viruses.

1 38. (new) The data management appliance of claim 35 wherein
2 checking comprises monitoring a database for consistency of constraints.

1 39. (new) The data management appliance of claim 35 wherein the
2 control logic is further operative to restore the copy of data stored on the first mirror-
3 in-the-middle to the primary storage system if the copy of data stored on the first
4 mirror-in-the-middle satisfies the at least one constraint.

1 40. (new) The data management appliance of claim 35 wherein the
2 control logic is further operative to check a copy of data stored on at least one
3 additional mirror-in-the-middle later in the sequence of mirrors-in-the-middle than
4 the first mirror-in-the-middle to see if the copy of data stored on the at least one
5 additional mirror-in-the-middle satisfies the at least one constraint if the copy of data
6 stored on the first mirror-in-the-middle satisfies the at least one constraint.

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